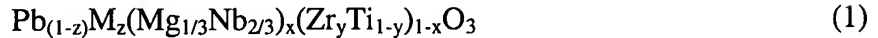


CLAIM AMENDMENTS

The following claims are to replace all prior versions of the claims.

1. (Currently Amended) A composition comprising a ceramic of formula 1 below:



wherein M is selected to be either Sr or Ba, x is selected to be between about 0.1 and about 0.7, y is selected to be between about 0.20 and about 0.70, and z is selected to be between about 0.02 and about 0.1, wherein said composition exhibits a piezoelectric strain constant (d_{33}) of at least 300 PC/N.

2. (Original) The composition of claim 1 comprising a dopant selected from the group consisting of: MnO_2 , Ni_2O_3 , TeO_2 , MoO_3 , Nb_2O_5 , Ta_2O_5 , Y_2O_3 , CoCO_3 , Sm_2O_3 , and mixtures thereof.

3. (Original) The composition of claim 2 containing between about 0.2 and about 0.4 wt % MnO_2 and between about 1.4 and about 1.8 wt % Nb_2O_5 .

4. (Original) The composition of claim 1 wherein M is Ba.

5. (Original) The composition of claim 1 wherein M is Sr.

6. (Currently Amended) The composition of claim 5 wherein z is selected to be between about ~~0.4~~ 0.04 and about ~~0.7~~ 0.08.

7. (Original) The composition of claim 1 wherein x is selected to be between about 0.2 and about 0.4

8. (Original) The composition of claim 7 wherein y is selected to be between about 0.2 and about 0.50.

9. (Original) The composition of claim 1 wherein y is selected to be between about 0.2 and about 0.50.

10. (Original) The composition of claim 9 wherein z is selected to be between about 0.04 and about 0.08.

11. (Original) The composition of claim 1 wherein z is selected to be between about 0.04 and about 0.08.

12. (Original) The composition of claim 1 having a density between about 7.65 and about 7.8 g/cc.

13. (Original) A piezoelectric element comprising the composition of claim 1 and having at least two electrodes formed thereon.

14. (Original) The composition of claim 1 exhibiting a mechanical quality factor Q_m of at least 900.

15. (Original) The composition of claim 1 exhibiting a relative permittivity (ϵ) of at least 2000 F/m.

16. (Original) The composition of claim 1 exhibiting a relative permittivity (ϵ) of at least 2500 F/m.

17. (Canceled)

18. (Original) The composition of claim 1 provided as a piezoelectric ceramic.

19. (Original) The composition of claim 1 provided as a ferroelectric ceramic.

20-31. (Canceled)

32. (New) The composition of claim 14 exhibiting a relative permittivity (ϵ) of at least 2000 F/m.

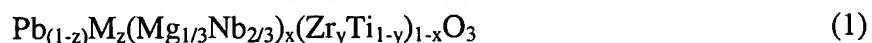
33. (New) The composition of claim 32 containing between about 0.2 and about 0.4 wt % MnO_2 and between about 1.4 and about 1.8 wt % Nb_2O_5 .

34. (New) The composition of claim 32 exhibiting a dielectric loss factor ($\tan \delta$) of between about 0.002 and about 0.008.

35. (New) The composition of claim 34 containing between about 0.2 and about 0.4 wt % MnO_2 and between about 1.4 and about 1.8 wt % Nb_2O_5 .

36. (New) The composition of claim 1 exhibiting an electromechanical coupling coefficient (k_t) of between about 0.4 and about 0.7.

37. (New) A composition comprising a ceramic of formula 1 below:



wherein M is selected to be either Sr or Ba, x is selected to be between about 0.1 and about 0.7, y is selected to be between about 0.20 and about 0.70, and z is selected to be between about 0.02 and about 0.1 and wherein the composition exhibits a relative permittivity (ϵ) of between about 2000 and about 4000 and a mechanical quality factor (Q_m) of between about 900 and about 2000.

38. (New) The composition of claim 37 exhibits a piezoelectric strain constant (d_{33}) of at least 300 PC/N.

39. (New) The composition of claim 37 comprising a dopant selected from the group consisting of: MnO_2 , Ni_2O_3 , TeO_2 , MoO_3 , Nb_2O_5 , Ta_2O_5 , Y_2O_3 , CoCO_3 , Sm_2O_3 , and mixtures thereof.

40. (New) The composition of claim 37 containing between about 0.2 and about 0.4 wt % MnO_2 and between about 1.4 and about 1.8 wt % Nb_2O_5 .

41. (New) The composition of claim 37 provided as a piezoelectric ceramic.

42. (New) The composition of claim 37 provided as a ferroelectric ceramic.